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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/546,962	04/11/2000	Peter Merchant	TELNP202USA	4166

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Himanshu S Amin Esq
Amin Eschweiler & Turocy LLP
24th Floor National City Center
1900 East 9th St
Cleveland, OH 44114

EXAMINER

LEE, SEUNG H

ART UNIT	PAPER NUMBER
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2876

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/546,962

Applicant(s)

MERCHANT, PETER

Examiner

Seung H. Lee

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-10,12-18,20,21 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-10,12-18,20,21 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Receipt is acknowledged of the response filed on 25 January 2006, which has been entered in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 8-10, 12-18, 20, 21, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brobst et al (US 6,053,409, of record) (hereinafter referred to as 'Brobst') in view of Tawara (US 5,710,418).

Re claims 1, 3-6, 8-10, 12, 15, 16, 18, 20, 21, 23; A system for scanning a barcode comprising a light source (122), a piezoelectric material reflector (124) having an arcuate reflective surface with a variable shape generally radial, a shape controlling system (260) for controlling the shape of reflector according to the voltage or power source, a beam expander (129) wherein the reflector reflecting a light beam from the light source onto the beam expander, the beam expander reflecting the light beam onto the target, and the shape controlling system varying the shape of the reflector (see Fig. 5-8; col. 5, lines 5- 60), a housing having horizontal top and bottom sides, vertical left and right sides, and an aperture in one of the sides(see Fig. 11; col. 6, line 44 – col. 8, line 3), the alternative beam expander (80 and 100) is shown in figures 3 and 4 having

the forms of flat facet (104) and convex facets (102' and 102'') for creating different focal points (see figs. 3 and 4; col. 3, lines 52- col. 4, line 47).

However, Brobst fairly suggest that the bema expander has a cylindrical reflective outer surface.

Tawara teaches an optical barcode reader comprising a beam expander such as a circular cone (44) having a mirror outer surface for reflecting scanning beam onto the target wherein a cylindrical mirror can be used alternatively for reflecting scanning beam in which the outer surface of the cylindrical mirror comprises a polished round pillar (not shown) (see figs. 5-6; col. 4, line 41-col. 5, line 45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the teachings of Tawara (i.e., cylindrical body for reflecting the scanning beam) into the system of Brobst in order to provide an simple and inexpensive reader by projecting a line laser beam for scanning barcodes.

Re claim 2: A photo sensor (132 and 154) generates an electrical representative of reflected light beam from the target (see Fig. 5, 5A; col. 4, lines 48-67).

Re claims 13, and 14: A conversion and interface system receiving the electrical signal from the photo sensor and converting the electrical signal to a digital code (see col. 3, lines 29- 45).

Re claim 17: The reflector includes a piezoelectric material having a metal electrode layer (262) and a piezoceramic layer (264) which serves as a two electrode wherein the shape of reflector varies according to the voltage across the electrodes (see Fig. 6, 7; col. 5, lines 25-42).

Response to Arguments

4. Applicant's arguments filed 26 January 2006 have been fully considered but they are not persuasive.

In response to applicant's argument that "... Nowhere in either of the reference is it discussed that a cylindrical beam expander can be used in combination with a piezoelectric material reflector having an arcuate reflective surface will be result in a barcode scanner with greater depth of field while at the same time minimizing electro-mechanical devices that may wear out over time. Hence neither of the references would motivate one of ordinary skill in the art to select the elements from them for combination in the manner claimed" (see page 3, line 18+), the Examiner respectfully disagrees with the applicant wherein Brobst reference teaches the piezoelectric material reflector having the arcuate reflective surface and Tawara reference teaches to use a cylindrical lens, cylindrical mirror or a conical member for reflecting light beam. Therefor, it would have been an obvious to one of ordinary skill in the art to combine/adapt the teachings of Tawara reference to the teachings of Brobst for producing simple and inexpensive reader as discussed above. The Examiner agrees with the applicant that the cylindrical lens, cylindrical mirror or a conical member of Tawara is mounted on the button where the button is used for adjusting barcode reader, however, such modification would provide an additional advantage/motivation to combine/adapt the teachings of Tawara to the barcode system of Brobst as mentioned by the applicant such as increasing depth of field by adjusting button, and the Examiner respectfully request why such

Art Unit: 2876

combination of reference (i.e., mounting the cylindrical lens, cylindrical mirror or a conical member on the button) is teaches away from the applicant's claimed invention. Finally, the Examiner respectfully requests the rational of the applicant argument (i.e., minimizing electro-mechanical devices that may wear out over time), that is, why does the barcode reader or parts of the barcode reader of the instant application is lasting longer than that of the Brobst and/or Tawara. The Examiner failed to locate such comparison between the claimed invention with other system in the specification and/or drawing.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2876

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seung H. Lee whose telephone number is (571) 272-2401. The examiner can normally be reached on Monday-Friday, 7:30 AM- 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Seung H Lee
Art Unit 2876
March 27, 2005